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Dr. M. W. Nirenberg,
Department of Health, Education,
and Welfare,
Bethesda 14,
M.D., U.S.A.

29th January, 1962.

Dear Dr. Nirenberg,

Thank you for your revised paper. We, too, thought we had evidence for degeneracy, as in our hands both poly (U,C) and Poly (U,A) incorporate leucine, and the result is not due to an impurity in the isotope. However, the argument obviously depends upon poly U not incorporating leucine, so we retested this. To our surprise and annoyance we found that our poly U does stimulate the incorporation of some leucine. The amount varies but on one occasion it was as high as 25% of the phenyalalamine incorporated.

Naturally we believe that the result with poly U is an artefact, but we have not been able to track it down. Until we have done this we don't feel we can trust the evidence from the other polymers.

As far as we can see the result is not due to impurities in our poly U. Apart from the fact that the polymers have been analysed by Marianne we do not find the incorporation of other amino acids which we should expect if other bases were present in our poly U.

I hope by the time we meet we shall have found the cause of the trouble.

Looking forward to discussing all this with you.

Yours sincerely,

Francis Crick

F. H. C. Crick